What is claimed is:

1   1.   In a virtual local area network (VLAN) environment, a method for

2   modifying the handling of packet data within the VLAN environment comprising the

3   steps of:

4   a VLAN aware device receiving a data packet;

5   examining a plurality of attributes associated with the data packet; and

6   modifying a priority queue of the data packet in relation to the nature of

7   said attributes.

1   2.   The method of claim 1 wherein one of the attributes examined in the step

2   of examining a plurality of attributes associated with the data packet is a port

3   number in a transport layer.

1   3.   The method of claim 1 wherein one of the attributes examined in the step

2   of examining a plurality of attributes associated with the data packet is a type of

3   service used in a network layer.

1   4.   The method of claim 1 wherein one of the attributes examined in the step

2   of examining a plurality of attributes associated with the data packet is a protocol of

3   a network layer.

1   5.   The method of claim 1 wherein one of the attributes examined in the step

2   of examining a plurality of attributes associated with the data packet is a priority tag.

1   6.   The method of claim 1 wherein one of the attributes examined in the step

2   of examining a plurality of attributes associated with the data packet is network

3   traffic load.

1   7.   The method of claim 1 wherein the step of modifying the priority queue of

2   the data packet moves the data packet to a lower priority queue.

1   8.   The method of claim 1 wherein the step of modifying the priority queue of

2   the data packet moves the data packet to a higher priority queue.

1   9.   The method of claim 1 wherein the step of modifying the priority queue of

2   the data packet keeps the data packet in the same priority queue.

1   10.   The method of claim 1 wherein the step of modifying the priority queue of

2   the data packet further includes the step of applying weighting factors to selected

3   attributes associated with said data packets.

1   11.   The method of claim 10 wherein said weighting factors are determined

2   according to values of selected attributes associated with said data packets.

1   12.   The method of claim 1 wherein said steps are preformed dynamically as

2   data packets are received at said VLAN aware device.

1   13.   In a virtual local area network (VLAN) aware device, a module for

2   modifying the handling of packet data within the VLAN environment, said module

3   comprising:

4   means for receiving a data packet;

5   means for examining a plurality of attributes associated with the data packet;

6   and

7   means for modifying the priority queue of the data packet in relation to the

8   nature of said attributes.

1   14.   The module of claim 13 wherein one of the attributes examined in the

2   means for examining a plurality of attributes associated with the data packet is a

3   port number in a transport layer.

1   15.   The module of claim 13 wherein one of the attributes examined in the

2   means for examining a plurality of attributes associated with the data packet is a

3   type of service used in a network layer.

1   16.   The module of claim 13 wherein one of the attributes examined in the

2   means for examining a plurality of attributes associated with the data packet is a

3   protocol of a network layer.

1   17.   The module of claim 13 wherein one of the attributes examined in the

2   means for examining a plurality of attributes associated with the data packet is a

3   priority tag.

1   18.   The module of claim 13 wherein one of the attributes examined in the

2   means for examining a plurality of attributes associated with the data packet is

3   network traffic load.

1   19.   The module of claim 13 wherein the means for modifying the priority

2   queue of the data packet moves the data packet to a lower priority queue.

1   20.   The module of claim 13 wherein the means for modifying the priority

2   queue of the data packet moves the data packet to a higher priority queue.

1   21.   The module of claim 13 wherein the means for modifying the priority

2   queue of the data packet keeps the data packet in the same priority queue.

1   22.   The module of claim 13 wherein the means for modifying the priority

2   queue of the data packet further includes means for applying weighting factors to

3   selected attributes associated with said data packets.

1   23.   The module of claim 22 wherein said weighting factors are determined

2   according to values of selected attributes associated with said data packets.

1   24.   In a virtual local area network (VLAN) environment, a program product for

2   modifying the handling of packet data within the VLAN environment, said program

3   product comprising:

4   logic means for receiving a data packet;

5   logic means for examining a plurality of attributes associated with the data

6   packet; and

7   logic means for modifying the priority queue of the data packet in relation to

8   the nature of said attributes.

1   25.   The program product of claim 24 wherein one of the attributes examined

2   in the logic means for examining a plurality of attributes associated with the data

3   packet is a port number in a transport layer.

1   26.   The program product of claim 24 wherein one of the attributes examined

2   in the logic means for examining a plurality of attributes associated with the data

3   packet is a type of service used in a network layer.

1   27.   The program product of claim 24 wherein one of the attributes examined

2   in the logic means for examining a plurality of attributes associated with the data

3   packet is a protocol of a network layer.

1   28.   The program product of claim 24 wherein one of the attributes examined

2   in the logic means for examining a plurality of attributes associated with the data

3   packet is a priority tag.

1   29.   The program product of claim 24 wherein one of the attributes examined

2   in the logic means for examining a plurality of attributes associated with the data

3   packet is network traffic load.

1   30.   The program product of claim 24 wherein the logic means for modifying

2   the priority queue of the data packet moves the data packet to a lower priority

3   queue.

1   31.   The program product of claim 24 wherein the logic means for modifying

2   the priority queue of the data packet moves the data packet to a higher priority

3   queue.

1   32.   The program product of claim 24 wherein the logic means for modifying

2   the priority queue of the data packet keeps the data packet in the same priority

3   queue.

4

1   33.   The program product of claim 24 wherein the logic means for modifying

2   the priority queue of the data packet further includes means for applying weighting

3   factors to selected attributes associated with said data packets.

1   34.   The program product of claim 33 wherein said weighting factors are

2   determined according to values of selected attributes associated with said data

3   packets.